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211044



REMOVAL SUPPORT TEAM
EPA CONTRACT 68-W-00-113

RST-02-F-00368

TRANSMITTAL MEMO

To: Mr. Akhil Verma
U.S. EPA Region II

From: Robert Finke, Organic Data Reviewer
RST Region II

Subject: Cornell Dubilier Electronics Site
Data Validation Assessment

Date: August 15, 2001

The purpose of this memo is to transmit the following information:

- Data validation results for the following parameters:
PCBs 26 Samples
- Matrices and Number of Samples
Soil 24 Samples
Water 2 Samples
- Sampling dates: June 14, 2001

The final data assessment narrative and original analytical data package are attached.

cc: RST PM: John Brennan
RST SITE FILE TDD #: 02-01-06-0004
ANALYTICAL TDD #: 02-01-06-0012
PCS#: 1352



U.S. ENVIRONMENTAL PROTECTION AGENCY

MEMORANDUM

DATE: August 15, 2001

TO: Mr. Akhil Verma, OSC
U.S. EPA Region II

FROM: Robert Finke
RST Data Review Team

SUBJECT: QA/QC Compliance Review Summary

As requested quality control and performance measures for the data packages noted have been examined and compared to EPA standards for compliance. Measures for the following general areas were evaluated as applicable:

Data Completeness	Blanks
Spectra Matching Quality	Compound ID
Surrogate Spikes	Chromatography
Matrix Spikes/Duplicates	Holding Times
Calibration	

Any statistical measures used to support the following conclusions are attached so that the review may be reviewed by others.

Summary of Results

I
PCBs

Acceptable as Submitted
Acceptable with Comments
Unacceptable, Action Pending
Unacceptable

 X

Data Reviewed by:

Robert Finke

Date: 8/15/01

Approved By:

Christa Sumbel

Date: 8/15/01

Area Code/Phone No.:

(732) 225-6116

NARRATIVE

CASE No. 1352

SITE NAME: Cornell Dubilier Electronics Site

South Plainfield, Middlesex County, New Jersey

Laboratory Name: Ecology and Environment, Lancaster, NY

INTRODUCTION:

The laboratory's portion of this Case consisted of 24 soil and 2 water samples collected on June 14, 2001.

The laboratory reported no problem(s) with the receipt of these samples.

The evaluator has commented on the criteria specified under each fraction heading. All criteria have been assessed, but no discussion is given where the evaluator has determined that criteria were adequately performed or require no comment. Details relevant to these comments are given on the forms followed.

Appropriate Form I's and Chain of Custody have been copied from the original data package and appended to the data assessment narrative for reference.

Evaluation by Fraction

I. PCBs

<u>Y</u> Holding Time	<u>Y</u> MS/MSD
<u>Y</u> GC/MS Tuning	<u>Y</u> Compound ID (HSL, TIC)
<u>Y</u> Calibration, Initial	<u>Y</u> Spectra Quality
<u>Y</u> Calibration, Continuing	<u>Y</u> Standards
<u>Y</u> Blank	<u>Y</u> Chromatography
<u>Y</u> Surrogate Recovery	<u>Y</u> Data Completeness
<u>Y</u> Laboratory Fortified Blank	<u>Y</u> Laboratory Storage Blank

Comments:

1. Refer to Data Assessment Narrative.

NARRATIVE

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<u>Y</u> GC/MS Tuning	<u>Y</u> Compound ID (HSL, TIC)
<u>Y</u> Calibration, Initial	<u>Y</u> Spectra Quality
<u>Y</u> Calibration, Continuing	<u>Y</u> Standards
<u>Y</u> Blank	<u>Y</u> Chromatography
<u>Y</u> Surrogate Recovery	<u>Y</u> Data Completeness
<u>Y</u> Laboratory Fortified Blank	<u>Y</u> Laboratory Storage Blank

Comments:

1. Refer to Data Assessment Narrative.

REGION II RST DATA ASSESSMENT REPORT

RFP Project #: 1352

Case #: NA

SDG #: N/A

LAB: Ecology and Environment

LAB Code: N/A

SITE: Cornell Dubilier Electronics

Analysis: PCBs

Contractor: RST

Reviewer: Robert Finke

Matrix:

Water: 02

Soil/Sediment: 24

CERCLIS ID #:

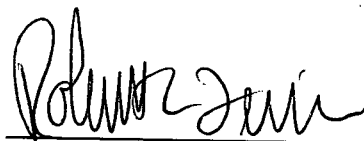
The current Functional Guidelines for evaluating organic data have been applied.

All data are valid and acceptable except those analytes which have been qualified with a "J" (estimated), "N" (presumptive evidence for the presence of the material), "U" (non-detects), "R" (unusable), or "JN" (presumptive evidence for the presence of the material at an estimated value). All action is detailed on the attached sheets.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Analytical data qualified as "JN" or "R" may not be used to demonstrate compliance with Toxicity Characteristic or Land Ban Regulations.

Reviewer's
Signature:



Date: 8/15/2001

Verified By: _____

Date: ____/____/20____

A.2.2 Data Assessment (continued):

On June 14, 2001, U.S. EPA Region II RST personnel collected 24 soil and two (2) water samples from the Cornel Dubilier Electronics Site, South Plainfield, Middlesex County, New Jersey. The samples were shipped within twenty-four hours of collection via overnight courier to Ecology and Environment, Inc. Laboratories, Lancaster, NY. The samples were analyzed for PCB determinations by U.S. EPA SW-846 Method 8082.

The laboratory verified that samples were received intact, properly custody sealed and refrigerated (sample cooler temperatures were recorded at 4.0°C). Client identification (ID) and laboratory ID numbers are as follows:

Client identification (ID) and laboratory ID numbers:

<u>Client ID</u>	<u>Lab ID.</u>	<u>Matrix</u>	<u>Analysis</u>
RIN061301	0106122-01A	WATER	PCBs
RIN061401	0106122-02A	WATER	PCBs
CDFF002B	0106122-03A	SOIL	PCBs
CDFF002C	0106122-04A	SOIL	PCBs
CDFF002D	0106122-05A	SOIL	PCBs
CDFF003B	0106122-06A	SOIL	PCBs
CDFF003C	0106122-07A	SOIL	PCBs
CDFF003D	0106122-08A	SOIL	PCBs
CDFF035A	0106122-09A	SOIL	PCBs
CDFF035B	0106122-10A	SOIL	PCBs
CDFF035C	0106122-11A	SOIL	PCBs
CDFF035D	0106122-12A	SOIL	PCBs
CDFF036A	0106122-13A	SOIL	PCBs
CDFF033C	0106122-14A	SOIL	PCBs
CDFF008B	0106122-15A	SOIL	PCBs
CDFF008C	0106122-16A	SOIL	PCBs
CDFF008D	0106122-17A	SOIL	PCBs
CDFF018B	0106122-18A	SOIL	PCBs
CDFF034A	0106122-19A	SOIL	PCBs
CDFF034B	0106122-20A	SOIL	PCBs
CDFF034C	0106122-21A	SOIL	PCBs
CDFF037A	0106122-22A	SOIL	PCBs
CDFF025B	0106122-23A	SOIL	PCBs
CDFF025C	0106122-24A	SOIL	PCBs
CDFF026B	0106122-25A	SOIL	PCBs
CDFF026C	0106122-26A	SOIL	PCBs

1) Samples CDFF036A/CDFF035A and CDFF034A/CDFF037A are field duplicate pairs.

A.2.2 Data Assessment (continued):

1. HOLDING TIMES:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.

The following analytes in the samples shown were qualified because of holding time:

PCBs - The following data were qualified as estimated "J" or rejected "R" due to exceeding holding time criteria:

<u>Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Extracted</u>	<u>VTSR at Lab</u>	<u>Date Analyzed</u>	<u>Qualifier</u>	<u># Compounds</u>
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Data met criteria

Note: Solid PCB samples must be extracted within seven (7) days of sample collection and analyzed within 40 days of extraction. Aqueous samples must be extracted within 7 days of collection and analyzed within 40 days of extraction.

A.2.2 Data Assessment (continued):

2. BLANK CONTAMINATION:

Quality Assurance (QA) blanks [i.e., method, trip, field or rinse blanks] are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. If the concentration of the analyte is less than 5 times the blank contaminant level (10 times for common contaminants), the analytes are qualified as non-detects, "U". The following analytes in the samples shown were qualified with "U" for these reasons:

A) Method Blank Contamination

PCBs - The following compounds were qualified as non-detected "U" in the associated samples due to method blank contamination:

<u>Compound</u>	<u>Associated Samples</u>
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Data met criteria

TICs - The following TICs were rejected "R" in the indicated samples due to detection in the associated method blank:

<u>TIC</u>	<u>Associated Method Blank</u>	<u>Associated Samples</u>
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Not Applicable

B) Field or Rinse Blank Contamination ("water blanks" or "distilled water blanks" are validated like any other sample)

PCBs - The following compounds were qualified as non-detected "U" in the associated samples due to rinse blank contamination:

<u>Compound</u>	<u>Associated Samples</u>
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Data met criteria

A.2.2 Data Assessment (continued):

3. MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds, and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is bromofluorobenzene (BFB) and for semi-volatiles is decafluorotriphenyl-phosphine (DFTPP).

If the mass calibration is in error or missing, all associated data will be classified as unusable "R". The following samples shown were qualified with "R" because of tuning:

PCBs: Data met criteria

A.2.2 Data Assessment (continued):

4. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument is giving satisfactory daily performance.

A) Response Factor:

The response factor measures the instrument's response to specific chemical compounds. The response factor for the VOA/BNA Target Compound List (TCL) must be ≥ 0.05 in both the initial and continuing calibrations. A value ≤ 0.05 indicates a serious detection and quantitation problem (poor sensitivity). If the mean RRF of the initial calibration or the continuing calibration has a response factor < 0.05 for any analyte, those analytes detected in environmental samples will be qualified as estimated "J". All non-detects for those compounds will be rejected "R". The following analytes in the samples shown were qualified because of response factor:

Initial Calibration

PCBs - The following compounds were either qualified as estimated "J" (positive values only) or rejected "R" (non-detected "U" values only) in the associated samples because the Initial Calibration Mean RRF value is < 0.05 :

Data met criteria

Continuing Calibration

PCBs - The following compounds were either qualified as estimated "J" (positive values only) or rejected "R" (non-detected "U" values only) in the associated samples because the Continuing Calibration RRF_{50} is < 0.05 :

Data met criteria

A.2.2 Data Assessment (continued):

B) PERCENT RELATIVE STANDARD DEVIATION (%RSD) AND PERCENT DIFFERENCE (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Percent RSD must be $< 30\%$ and %D must be $< 25\%$. A value outside of these QC limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J"; and non-detects are flagged "UJ". If %RSD and/or %D grossly exceed QC criteria, non-detect data may be qualified "R".

For the PESTICIDE/PCB fraction, if %RSD exceeds 20% for all analytes except for the 2 surrogates (which must not exceed 30% RSD), qualify all associated positive results "J" and non-detects "UJ".

The following analytes in the samples shown were qualified for %RSD and %D:

Initial Calibration

PCBs - Positive values of the following compounds were qualified as estimated "J" in the associated samples because the Initial Calibration %RSD is between 30-90% when the mean RRF is > 0.05 :

<u>Compound</u>	<u>Associated Sample(s)</u>
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Data met criteria

PCBs - Positive values of the following compounds were qualified as estimated "J" in the associated samples because the Initial Calibration %RSD is between 30-90% when the mean RRF is > 0.05 :

<u>Compound</u>	<u>Associated Sample(s)</u>
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Data met criteria

PCBs - The following compounds were qualified as estimated "J" or rejected "R" in the associated samples because the linearity criteria or the percent relative standard deviation (%RSD) of the Initial Calibration is $> 20\%$ for either one or both GC columns:

<u>Compound</u>	<u>Percent Recovery</u>	<u>Qualifier</u>	<u>Associated Sample(s)</u>
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Data met criteria.

Continuing Calibration

PCBs - The following compounds were qualified as estimated "J" because the Continuing Calibration %D is between 25-90% when the RRF_{50} is > 0.05 :

<u>Compound</u>	<u>Qualifier</u>	<u>Associated Sample(s)</u>
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Data met criteria

A.2.2 Data Assessment (continued):

PCBs - The Relative Percent Difference (%RPD) for PEM compound amounts in the continuing calibration verification analyses and/or the RPD amounts in the Individual Standard Mixes of the continuing calibration verification analyses are $\geq 25\%$ for either one or both GC columns. The following compounds were either qualified as estimated "J" or rejected "R" due to exceeding Continuing Calibration QC criteria:

The following compounds were qualified as estimated "J" in the associated samples because the Continuing Calibration %D is between 20-90% for these compounds on the primary GC column:

<u>Compound</u>	<u>%D</u>	<u>Qualifier</u>	<u>Associated Sample(s)</u>
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Data met criteria

A.2.2 Data Assessment (continued):

5. SURROGATES/SYSTEM MONITORING COMPOUNDS (SMC):

All samples are spiked with surrogate/SMC compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate/SMC concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below. The following analytes for the samples shown were qualified because of surrogate/SMC recovery:

PCBs - The following compounds were either qualified as estimated "J" or rejected "R" due to surrogate recovery outside specified QC limits:

<u>Surrogate</u>	<u>Recovery</u>	<u>Qualifier</u>	<u>Compounds</u>	<u>Sample(s)</u>
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Data met criteria

A.2.2 Data Assessment (continued):

6. INTERNAL STANDARDS PERFORMANCE:

Internal standard (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must not vary by more than a factor of 2 (-50% to 100%) from the associated continuing calibration standard. The retention time of the internal standard must not vary more than ± 30 seconds from the associated continuing calibration standard. If the area count is outside the -50% to 100% range of the associated standard, all of the positive results for compounds quantitated using that IS are qualified as estimated "J", and all non-detects as "UJ" only if the IS area is <50%. Non-detects are qualified as "R" if there is a severe loss of sensitivity (<25% of associated IS area counts).

If an internal standard retention time varies by more than 30 seconds, the reviewer will use professional judgement to determine either partial or total rejection of the data for that sample fraction. The following analytes in the samples shown were qualified because of internal standard performance:

The following compounds were either qualified as estimated "J" or rejected "R" in the associated samples due to exceeding Internal Standard (IS) QC criteria (within -50% to + 100% of the Continuing Calibration 12-hour standard):

<u>Internal Standard</u>	<u>Percent IS Area Count of the 12-Hour Standard</u>	<u>Qualifier</u>	<u>Total Analytes Qualified/Sample</u>	<u>Associated Sample(s)</u>
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Not Applicable

A.2.2 Data Assessment (continued):

7. COMPOUND IDENTIFICATION:

A) VOLATILE AND SEMI-VOLATILE FRACTIONS:

TCL compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within ± 0.06 RRT units of the standard compound, and have an ion spectra which has a ratio of the primary and secondary m/e intensities within 20% of that in the standard compound. For the Tentatively Identified Compounds (TICs) the ion spectra must match accurately. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications. The following analytes in the samples shown were qualified for compound identification:

The following compounds were qualified as estimated "J" in the indicated samples because they could not be chromatographically resolved:

<u>Fraction</u>	<u>Compounds</u>	<u>Samples</u>
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Not Applicable

B) PESTICIDE FRACTION:

The retention time of the reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10 ng/ml in the final sample extract. The percent difference (%D) of the positive results obtained on the two GC columns would be $\leq 25\%$. The following analytes in the samples shown were qualified because of compound identification:

PCBs - The following detected compounds were qualified due to a percent difference (%D) between the primary and confirmation columns $> 25\%$:

<u>Compound</u>	<u>%D</u>	<u>Qualifier</u>	<u>Matrix</u>	<u>Sample(s)</u>
Aroclor 1254	40.9	J	Soil	CDFF003B
Aroclor 1254	26.7	J	Soil	CDFF035A
Aroclor 1254	43.5	J	Soil	CDFF003C
Aroclor 1254	40.9	J	Soil	CDFF008D
Aroclor 1254	26.3	J	Soil	CDFF025C

A.2.2 Data Assessment (continued):

8. MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:

The MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD may be used in conjunction with other QC criteria for some additional qualification of the data. The following analytes, for the samples shown, were qualified because of MS/MSD:

The laboratory indicated in the case narrative that sample CDFF034C was used as the original to prepare the duplicate matrix spikes.

PCBs - The following sample data were either qualified as estimated "J" or rejected "R" due to exceeding duplicate spike recovery QC criteria:

<u>Original Sample</u>	<u>Spike Recovery</u>	<u>Qualifier</u>	<u>Compound(s)</u>
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No qualification required

A.2.2 Data Assessment (continued):

9. OTHER QC DATA OUT OF SPECIFICATION:

PCBs - The following compounds were qualified as estimated "J" in the associated aqueous and/or soil/sediment field duplicate samples because the Relative Percent Difference (RPD) between the sample and field duplicate sample is > 50% for aqueous samples, or > 100% for soil/sediment samples:

<u>Compound</u>	<u>Matrix</u>	<u>% RPD</u>	<u>Associated Field Duplicate Samples</u>
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Data met criteria

Percent Solids: The following soil/sediment/solid sample data (other than TCLP data) were either qualified as estimated "J" (% solids between 10-50%) or rejected "R" (% solids < 10%) because the sample contains more than 50% water:

<u>Fraction</u>	<u>Percent Solids</u>	<u>Qualifier</u>	<u># Compounds</u>	<u>Sample(s)</u>
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Data met criteria

A.2.2 Data Assessment (continued):

10. OTHER QC DATA OUT OF SPECIFICATION (continued):

The following compounds were qualified as estimated "J" in the indicated samples because the on-column amount of these compounds exceeded the instrument's analytical range as defined by the highest concentration level of the Initial Calibration Sequence:

<u>Fraction</u>	<u>Compound(s)</u>	<u>Sample(s)</u>
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None

11. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT:

Due to professional judgement, the following compounds were not transferred from the indicated dilution sample analyses to the undiluted sample analyses because the reported values of these compounds are qualified as non-detected "U" due to blank contamination QC criteria:

<u>Fraction</u>	<u>Compound</u>	<u>Dilution Sample(s)</u>	<u>Dilution Factor</u>
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No qualification was required.

Due to professional judgement, the following positive data were rejected "R" due to possible carryover from a previous sample analysis that contained the compound(s) at high concentration(s):

<u>Fraction</u>	<u>Sample</u>	<u>Compound</u>	<u>Sample Compound Concentration</u>	<u>Previous Sample Compound Concentration</u>
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No qualification was required.

12. CONTRACT PROBLEMS/NON-COMPLIANCE:

None

13. This package contain re-extraction, re-analysis or dilution results. Upon reviewing the QA results, the following Form I(s) are identified to be used:

None

A.2.3 Contract Problem/Non-Compliance:

None

PCB Results
Cornell Dubilier Electronics Site
South Plainfield, Middlesex County, New Jersey
Parts Per Billion (ug/Kg)

Sampling Date: June 14, 2001

PCBs Low Concentration	Matrix Client ID# Lab ID# % Moisture Dilution Factor Detection Limit	Soil CDFF002B 0106122-03A 10.3 20	Soil CDFF002C 0106122-04A 12 2	Soil CDFF002D 0106122-05A 14.8 2	Soil CDFF003B 0106122-06A 12.4 1	Soil CDFF003C 0106122-07A 12.6 1	Soil CDFF003D 0106122-08A 10.9 1	Soil CDFF035A 0106122-09A 16.2 20	Soil CDFF035B 0106122-10A 14.6 4	Soil CDFF035C 0106122-11A 13.5 4	Soil CDFF035D 0106122-12A 10.6 1
Aroclor-1016	18.8	U	U	U	U	U	U	U	U	U	U
Aroclor-1221	37.6	U	U	U	U	U	U	U	U	U	U
Aroclor-1232	18.8	U	U	U	U	U	U	U	U	U	U
Aroclor-1242	18.8	U	U	U	U	U	U	U	U	U	U
Aroclor-1248	18.8	U	U	U	U	U	U	U	U	U	U
Aroclor-1254	18.8	1760	134	237	25.2 J	19.4 J	26.3	1350 J	302	227	86.2
Aroclor-1260	18.8	U	U	U	U	U	U	U	U	U	U

PCBs Low Concentration	Matrix Client ID# Lab ID# % Moisture Dilution Factor Detection Limit	Soil CDFF036A 0106122-13A 19.8 10	Soil CDFF033C 0106122-14A 21.8 20	Soil CDFF008B 0106122-15A 13.1 5	Soil CDFF008C 0106122-16A 14.6 1	Soil CDFF008D 0106122-17A 14.6 1	Soil CDFF018B 0106122-18A 11.9 5	Soil CDFF034A 0106122-19A 10.9 3	Soil CDFF034B 0106122-20A 8.6 5	Soil CDFF034C 0106122-21A 10.2 10	Soil CDFF037A 0106122-22A 4.4 5
Aroclor-1016	18.8	U	U	U	U	U	U	U	U	U	U
Aroclor-1221	37.6	U	U	U	U	U	U	U	U	U	U
Aroclor-1232	18.8	U	U	U	U	U	U	U	U	U	U
Aroclor-1242	18.8	U	U	U	U	U	U	U	U	U	159
Aroclor-1248	18.8	U	U	U	U	U	U	U	U	U	U
Aroclor-1254	18.8	734	1180	966	124	127 J	1050	776	640	616	376
Aroclor-1260	18.8	U	U	U	U	U	U	U	U	U	377

PCBs Low Concentration	Matrix Client ID# Lab ID# % Moisture Dilution Factor Detection Limit	Soil CDFF025B 0106122-23A 10.1 5	Soil CDFF025C 0106122-24A 9.8 5	Soil CDFF026B 0106122-25A 10.5 5	Soil CDFF026C 0106122-26A 14.0 5
Aroclor-1016	18.8	U	U	U	U
Aroclor-1221	37.6	U	U	U	U
Aroclor-1232	18.8	U	U	U	U
Aroclor-1242	18.8	U	U	U	U
Aroclor-1248	18.8	U	U	U	U
Aroclor-1254	18.8	456	684 J	1330	747
Aroclor-1260	18.8	U	U	U	U

U - Non-detected compound

UJ - Presumptive evidence of compound present at an estimated concentration

J - Estimated value

Ecology and Environment, Inc.

Analytical Services Center

4493 Walden Avenue

Lancaster, New York 14086



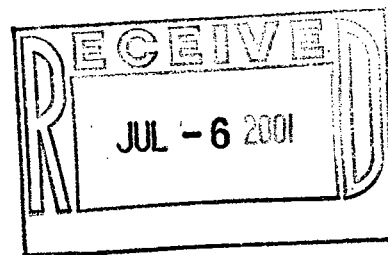
Laboratory Results

NYS ELAP ID#: 10486

Phone: (716) 685-8080

July 05, 2001

Ms. Smita Sumbaly
Roy F. Weston, Inc.
1090 King Georges Post Road
Suite 201
Edison, NJ 088373703



RE: START RFP 1352
Work Order No.: 0106122

Dear Ms. Smita Sumbaly,

Ecology and Environment, Inc. received 26 samples on Friday, June 15, 2001 for the analyses presented in the following report.

You will receive an invoice under separate cover.

E & E will retain the samples addressed in this report for 30 days, unless otherwise instructed by the client. If additional storage is requested, the storage fee is \$1.00 per sample container per month, to accrue until the client authorizes sample destruction.

Sincerely,

Tony Bogolin

Project Manager

CC:

Enclosures as note

This report ends on page 704

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Ecology and Environment, Inc.

Analytical Services Center

Lancaster, New York 14086

Phone: (716) 685-8080

Laboratory Results

NYS ELAP ID#: 10486

CLIENT: Roy F. Weston, Inc.

Project: START RFP 1352

Lab Order: 0106122

Date Received: 06/15/2001

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Alt. Client Id	Collection Date
0106122-01A	RIN061301		06/14/2001 10:05:00 AM
0106122-02A	RIN061401		06/14/2001 12:40:00 PM
0106122-03A	CDFF002B		06/14/2001 10:20:00 AM
0106122-04A	CDFF002C		06/14/2001 10:25:00 AM
0106122-05A	CDFF002D		06/14/2001 10:30:00 AM
0106122-06A	CDFF003B		06/14/2001 10:40:00 AM
0106122-07A	CDFF003C		06/14/2001 10:45:00 AM
0106122-08A	CDFF003D		06/14/2001 10:50:00 AM
0106122-09A	CDFF035A		06/14/2001 11:05:00 AM
0106122-10A	CDFF035B		06/14/2001 11:10:00 AM
0106122-11A	CDFF035C		06/14/2001 11:15:00 AM
0106122-12A	CDFF035D		06/14/2001 11:20:00 AM
0106122-13A	CDFF036A		06/14/2001 11:30:00 AM
0106122-14A	CDFF033C		06/14/2001 11:40:00 AM
0106122-15A	CDFF008B		06/14/2001 12:45:00 PM
0106122-16A	CDFF008C		06/14/2001 12:50:00 PM
0106122-17A	CDFF008D		06/14/2001 12:55:00 PM
0106122-18A	CDFF018B		06/14/2001 1:05:00 PM
0106122-19A	CDFF034A		06/14/2001 1:10:00 PM
0106122-20A	CDFF034B		06/14/2001 1:15:00 PM
0106122-21A	CDFF034C		06/14/2001 1:20:00 PM
0106122-22A	CDFF037A		06/14/2001 1:25:00 PM
0106122-23A	CDFF025B		06/14/2001 1:40:00 PM
0106122-24A	CDFF025C		06/14/2001 1:45:00 PM
0106122-25A	CDFF026B		06/14/2001 1:55:00 PM
0106122-26A	CDFF026C		06/14/2001 2:00:00 PM

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SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

RIN061301

Lab Name: Ecology and Environment, Inc.

Contract: RFP #1352/P

Lab Code: ECEN

Case No.: WESTON - EDISON/START

SDG No.: 0106122

Matrix: (soil/water) WATER

Lab Sample ID: 0106122-01A

Sample wt/vol: 980 (g/mL) ML

Lab File ID: 369875

% Moisture: not dec.

Date Received: 6/15/01

Extraction: (SepF/Cont/Sonc) SW3510C

Date Extracted: 6/20/01

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 6/22/01

Injection Volume: 2 (uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	<u>ug/L</u>	Q
12674-11-2	Aroclor 1016		0.51	U
11104-28-2	Aroclor 1221		1.02	U
11141-16-5	Aroclor 1232		0.51	U
53469-21-9	Aroclor 1242		0.51	U
12672-29-6	Aroclor 1248		0.51	U
11097-69-1	Aroclor 1254		0.51	U
11096-82-5	Aroclor 1260		0.51	U

SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

RIN061401

Lab Name: Ecology and Environment, Inc.Contract: RFP #1352/PLab Code: ECENCase No.: WESTON - EDISON/STARTSDG No.: 0106122

Matrix: (soil/water)

WATERLab Sample ID: 0106122-02ASample wt/vol: 880(g/mL) MLLab File ID: 369878

% Moisture: not dec.

Date Received: 6/15/01Extraction: (SepF/Cont/Sonc) SW3510CDate Extracted: 6/20/01Concentrated Extract Volume: 10000 (uL)Date Analyzed: 6/22/01Injection Volume: 2 (uL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH:Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg)

ug/L

Q

12674-11-2	Aroclor 1016	0.568	U
11104-28-2	Aroclor 1221	1.14	U
11141-16-5	Aroclor 1232	0.568	U
53469-21-9	Aroclor 1242	0.568	U
12672-29-6	Aroclor 1248	0.568	U
11097-69-1	Aroclor 1254	0.568	U
11096-82-5	Aroclor 1260	0.568	U

SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CDFF002B

Lab Name: Ecology and Environment, Inc.Contract: RFP #1352/PLab Code: ECENCase No.: WESTON - EDISON/STARTSDG No.: 0106122Matrix: (soil/water) SOILLab Sample ID: 0106122-03ASample wt/vol: 30.74 (g/mL) GLab File ID: 372486% Moisture: not dec. 10.3Date Received: 6/15/01Extraction: (SepF/Cont/Sonc) SW3550BDate Extracted: 6/20/01Concentrated Extract Volume: 10000 (uL)Date Analyzed: 6/27/01Injection Volume: 2 (uL)Dilution Factor: 20.00GPC Cleanup: (Y/N) N pH:Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg-dry Q

12674-11-2	Aroclor 1016	435	U
11104-28-2	Aroclor 1221	870	U
11141-16-5	Aroclor 1232	435	U
53469-21-9	Aroclor 1242	435	U
12672-29-6	Aroclor 1248	435	U
11097-69-1	Aroclor 1254	1760	U
11096-82-5	Aroclor 1260	435	U

SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CDFF002C

Lab Name: Ecology and Environment, Inc.Contract: RFP #1352/PLab Code: ECENCase No.: WESTON - EDISON/STARTSDG No.: 0106122Matrix: (soil/water) SOILLab Sample ID: 0106122-04ASample wt/vol: 31.37 (g/mL) GLab File ID: 372485% Moisture: not dec. 12Date Received: 6/15/01Extraction: (SepF/Cont/Sonc) SW3550BDate Extracted: 6/20/01Concentrated Extract Volume: 10000 (uL)Date Analyzed: 6/27/01Injection Volume: 2 (uL)Dilution Factor: 2.00GPC Cleanup: (Y/N) N pH:Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg)

ug/Kg-dry Q

12674-11-2	Aroclor 1016	43.5	U
11104-28-2	Aroclor 1221	86.9	U
11141-16-5	Aroclor 1232	43.5	U
53469-21-9	Aroclor 1242	43.5	U
12672-29-6	Aroclor 1248	43.5	U
11097-69-1	Aroclor 1254	134	U
11096-82-5	Aroclor 1260	43.5	U

SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CDFF002D

Lab Name: Ecology and Environment, Inc.Contract: RFP #1352/PLab Code: ECENCase No.: WESTON - EDISON/STARTSDG No.: 0106122Matrix: (soil/water) SOILLab Sample ID: 0106122-05ASample wt/vol: 30.56 (g/mL) GLab File ID: 372484% Moisture: not dec. 14.8Date Received: 6/15/01Extraction: (SepF/Cont/Sonc) SW3550BDate Extracted: 6/20/01Concentrated Extract Volume: 10000 (uL)Date Analyzed: 6/27/01Injection Volume: 2 (uL)Dilution Factor: 2.00GPC Cleanup: (Y/N) N pH:Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) µg/Kg-dry Q

12674-11-2	Aroclor 1016	46.1	U
11104-28-2	Aroclor 1221	92.2	U
11141-16-5	Aroclor 1232	46.1	U
53469-21-9	Aroclor 1242	46.1	U
12672-29-6	Aroclor 1248	46.1	U
11097-69-1	Aroclor 1254	237	J
11096-82-5	Aroclor 1260	46.1	U

SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CDFF003B

Lab Name: Ecology and Environment, Inc.Contract: RFP #1352/PLab Code: ECENCase No.: WESTON - EDISON/STARTSDG No.: 0106122

Matrix: (soil/water)

SOILLab Sample ID: 0106122-06ASample wt/vol: 31.13 (g/mL) GLab File ID: 372483% Moisture: not dec. 12.4Date Received: 6/15/01Extraction: (SepF/Cont/Sonc) SW3550BDate Extracted: 6/20/01Concentrated Extract Volume: 10000 (uL)Date Analyzed: 6/27/01Injection Volume: 2 (uL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH:Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg)

ug/Kg-dry Q

12674-11-2	Aroclor 1016	22	U
11104-28-2	Aroclor 1221	44	U
11141-16-5	Aroclor 1232	22	U
53469-21-9	Aroclor 1242	22	U
12672-29-6	Aroclor 1248	22	U
11097-69-1	Aroclor 1254	25.2	J
11096-82-5	Aroclor 1260	22	U

SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CDFF003C

Lab Name: Ecology and Environment, Inc.Contract: RFP #1352/PLab Code: ECENCase No.: WESTON - EDISON/STARTSDG No.: 0106122Matrix: (soil/water) SOILLab Sample ID: 0106122-07ASample wt/vol: 31.64 (g/mL) GLab File ID: 372482% Moisture: not dec. 12.6Date Received: 6/15/01Extraction: (SepF/Cont/Sonc) SW3550BDate Extracted: 6/20/01Concentrated Extract Volume: 10000 (uL)Date Analyzed: 6/27/01Injection Volume: 2 (uL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH:Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg)

ug/Kg-dry Q

12674-11-2	Aroclor 1016	21.7	U
11104-28-2	Aroclor 1221	43.4	U
11141-16-5	Aroclor 1232	21.7	U
53469-21-9	Aroclor 1242	21.7	U
12672-29-6	Aroclor 1248	21.7	U
11097-69-1	Aroclor 1254	19.4	J
11096-82-5	Aroclor 1260	21.7	U

SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CDFF003D

Lab Name: Ecology and Environment, Inc.Contract: RFP #1352/PLab Code: ECENCase No.: WESTON - EDISON/STARTSDG No.: 0106122Matrix: (soil/water) SOILLab Sample ID: 0106122-08ASample wt/vol: 31.99 (g/mL) GLab File ID: 372481% Moisture: not dec. 10.9Date Received: 6/15/01Extraction: (SepF/Cont/Sonc) SW3550BDate Extracted: 6/20/01Concentrated Extract Volume: 10000 (uL)Date Analyzed: 6/27/01Injection Volume: 2 (uL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH:Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg)

ug/Kg-dry

Q

12674-11-2	Aroclor 1016	21.1	U
11104-28-2	Aroclor 1221	42.1	U
11141-16-5	Aroclor 1232	21.1	U
53469-21-9	Aroclor 1242	21.1	U
12672-29-6	Aroclor 1248	21.1	U
11097-69-1	Aroclor 1254	26.3	.
11096-82-5	Aroclor 1260	21.1	U

SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CDFF035A

Lab Name: Ecology and Environment, Inc.Contract: RFP #1352/PLab Code: ECENCase No.: WESTON - EDISON/STARTSDG No.: 0106122Matrix: (soil/water) SOILLab Sample ID: 0106122-09ASample wt/vol: 30.65 (g/mL) GLab File ID: 372480% Moisture: not dec. 16.2Date Received: 6/15/01Extraction: (SepF/Cont/Sonc) SW3550BDate Extracted: 6/20/01Concentrated Extract Volume: 10000 (uL)Date Analyzed: 6/27/01Injection Volume: 2 (uL)Dilution Factor: 20.00GPC Cleanup: (Y/N) N pH:Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) µg/Kg-dry Q

12674-11-2	Aroclor 1016	467	U
11104-28-2	Aroclor 1221	934	U
11141-16-5	Aroclor 1232	467	U
53469-21-9	Aroclor 1242	467	U
12672-29-6	Aroclor 1248	467	U
11097-69-1	Aroclor 1254	1350	J
11096-82-5	Aroclor 1260	467	U

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CLIENT SAMPLE NO.

SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CDFF035B

Lab Name: Ecology and Environment, Inc.Contract: RFP #1352/PLab Code: ECENCase No.: WESTON - EDISON/STARTSDG No.: 0106122Matrix: (soil/water) SOILLab Sample ID: 0106122-10ASample wt/vol: 30.02 (g/mL) GLab File ID: 372479% Moisture: not dec. 14.6Date Received: 6/15/01Extraction: (SepF/Cont/Sonc) SW3550BDate Extracted: 6/20/01Concentrated Extract Volume: 10000 (uL)Date Analyzed: 6/27/01Injection Volume: 2 (uL)Dilution Factor: 4.00GPC Cleanup: (Y/N) N pH:Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg-dry Q

12674-11-2	Aroclor 1016	93.6	U
11104-28-2	Aroclor 1221	187	U
11141-16-5	Aroclor 1232	93.6	U
53469-21-9	Aroclor 1242	93.6	U
12672-29-6	Aroclor 1248	93.6	U
11097-69-1	Aroclor 1254	302	
11096-82-5	Aroclor 1260	93.6	U

FORM I

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SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CDFF035C

Lab Name: Ecology and Environment, Inc.Contract: RFP #1352/PLab Code: ECENCase No.: WESTON - EDISON/STARTSDG No.: 0106122Matrix: (soil/water) SOILLab Sample ID: 0106122-11ASample wt/vol: 32.54 (g/mL) GLab File ID: 372478% Moisture: not dec. 13.5Date Received: 6/15/01Extraction: (SepF/Cont/Sonc) SW3550BDate Extracted: 6/20/01Concentrated Extract Volume: 10000 (uL)Date Analyzed: 6/27/01Injection Volume: 2 (uL)Dilution Factor: 4.00GPC Cleanup: (Y/N) N pH:Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg)

ug/Kg-dry Q

12674-11-2	Aroclor 1016	85.3	U
11104-28-2	Aroclor 1221	171	U
11141-16-5	Aroclor 1232	85.3	U
53469-21-9	Aroclor 1242	85.3	U
12672-29-6	Aroclor 1248	85.3	U
11097-69-1	Aroclor 1254	227	
11096-82-5	Aroclor 1260	85.3	U

SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CDFF035D

Lab Name: Ecology and Environment, Inc. Contract: RFP #1352/P

Lab Code: ECEN Case No.: WESTON - EDISON/START SDG No.: 0106122

Matrix: (soil/water) SOIL Lab Sample ID: 0106122-12A

Sample wt/vol: 33.29 (g/mL) G Lab File ID: 372477

% Moisture: not dec. 10.6 Date Received: 6/15/01

Extraction: (SepF/Cont/Sonc) SW3550B Date Extracted: 6/20/01

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 6/27/01

Injection Volume: 2 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	<u>ug/Kg-dry</u>	Q
12674-11-2	Aroclor 1016		20.2	U
11104-28-2	Aroclor 1221		40.3	U
11141-16-5	Aroclor 1232		20.2	U
53469-21-9	Aroclor 1242		20.2	U
12672-29-6	Aroclor 1248		20.2	U
11097-69-1	Aroclor 1254		86.2	
11096-82-5	Aroclor 1260		20.2	U

SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CDDFF036A

Lab Name: Ecology and Environment, Inc.Contract: RFP #1352/PLab Code: ECENCase No.: WESTON - EDISON/STARTSDG No.: 0106122Matrix: (soil/water) SOILLab Sample ID: 0106122-13ASample wt/vol: 30.66 (g/mL) GLab File ID: 372474% Moisture: not dec. 19.8Date Received: 6/15/01Extraction: (SepF/Cont/Sonc) SW3550BDate Extracted: 6/20/01Concentrated Extract Volume: 10000 (uL)Date Analyzed: 6/27/01Injection Volume: 2 (uL)Dilution Factor: 10.00GPC Cleanup: (Y/N) N pH:Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg-dry Q

12674-11-2	Aroclor 1016	244	U
11104-28-2	Aroclor 1221	488	U
11141-16-5	Aroclor 1232	244	U
53469-21-9	Aroclor 1242	244	U
12672-29-6	Aroclor 1248	244	U
11097-69-1	Aroclor 1254	734	
11096-82-5	Aroclor 1260	244	U

SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CDFF033C

Lab Name: Ecology and Environment, Inc.Contract: RFP #1352/PLab Code: ECENCase No.: WESTON - EDISON/STARTSDG No.: 0106122Matrix: (soil/water) SOILLab Sample ID: 0106122-14ASample wt/vol: 31.39 (g/mL) GLab File ID: 372488% Moisture: not dec. 21.8Date Received: 6/15/01Extraction: (SepF/Cont/Sonc) SW3550BDate Extracted: 6/20/01Concentrated Extract Volume: 10000 (uL)Date Analyzed: 6/27/01Injection Volume: 2 (uL)Dilution Factor: 20.00GPC Cleanup: (Y/N) N pH:Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg-dry Q

12674-11-2	Aroclor 1016	489	U
11104-28-2	Aroclor 1221	978	U
11141-16-5	Aroclor 1232	489	U
53469-21-9	Aroclor 1242	489	U
12672-29-6	Aroclor 1248	489	U
11097-69-1	Aroclor 1254	1180	
11096-82-5	Aroclor 1260	489	U

SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CDFF008B

Lab Name: Ecology and Environment, Inc.Contract: RFP #1352/PLab Code: ECENCase No.: WESTON - EDISON/STARTSDG No.: 0106122Matrix: (soil/water) SOILLab Sample ID: 0106122-15ASample wt/vol: 31.29 (g/mL) GLab File ID: 369873% Moisture: not dec. 13.1Date Received: 6/15/01Extraction: (SepF/Cont/Sonc) SW3550BDate Extracted: 6/20/01Concentrated Extract Volume: 10000 (uL)Date Analyzed: 6/25/01Injection Volume: 2 (uL)Dilution Factor: 5.00GPC Cleanup: (Y/N) N pH:Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg)

ug/Kg-dry

Q

12674-11-2	Aroclor 1016	110	U
11104-28-2	Aroclor 1221	221	U
11141-16-5	Aroclor 1232	110	U
53469-21-9	Aroclor 1242	110	U
12672-29-6	Aroclor 1248	110	U
11097-69-1	Aroclor 1254	966	
11096-82-5	Aroclor 1260	110	U

SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CDDFF008C

Lab Name: Ecology and Environment, Inc.Contract: RFP #1352/PLab Code: ECENCase No.: WESTON - EDISON/STARTSDG No.: 0106122Matrix: (soil/water) SOILLab Sample ID: 0106122-16ASample wt/vol: 30.88 (g/mL) GLab File ID: 369871% Moisture: not dec. 14.6Date Received: 6/15/01Extraction: (SepF/Cont/Sonc) SW3550BDate Extracted: 6/20/01Concentrated Extract Volume: 10000 (uL)Date Analyzed: 6/23/01Injection Volume: 2 (uL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH:Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg-dry Q

12674-11-2	Aroclor 1016	22.8	U
11104-28-2	Aroclor 1221	45.5	U
11141-16-5	Aroclor 1232	22.8	U
53469-21-9	Aroclor 1242	22.8	U
12672-29-6	Aroclor 1248	22.8	U
11097-69-1	Aroclor 1254	124	
11096-82-5	Aroclor 1260	22.8	U

SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CDFF008D

Lab Name: Ecology and Environment, Inc.Contract: RFP #1352/PLab Code: ECENCase No.: WESTON - EDISON/STARTSDG No.: 0106122Matrix: (soil/water) SOILLab Sample ID: 0106122-17ASample wt/vol: 31.95 (g/mL) GLab File ID: 369870% Moisture: not dec. 14.6Date Received: 6/15/01Extraction: (SepF/Cont/Sonc) SW3550BDate Extracted: 6/20/01Concentrated Extract Volume: 10000 (uL)Date Analyzed: 6/23/01Injection Volume: 2 (uL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH:Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg-dry Q

12674-11-2	Aroclor 1016	22	U
11104-28-2	Aroclor 1221	44	U
11141-16-5	Aroclor 1232	22	U
53469-21-9	Aroclor 1242	22	U
12672-29-6	Aroclor 1248	22	U
11097-69-1	Aroclor 1254	127	U
11096-82-5	Aroclor 1260	22	U

SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CDFF018B

Lab Name: Ecology and Environment, Inc.Contract: RFP #1352/PLab Code: ECENCase No.: WESTON - EDISON/STARTSDG No.: 0106122Matrix: (soil/water) SOILLab Sample ID: 0106122-18ASample wt/vol: 31.76 (g/mL) GLab File ID: 369869% Moisture: not dec. 11.9Date Received: 6/15/01Extraction: (SepF/Cont/Sonc) SW3550BDate Extracted: 6/20/01Concentrated Extract Volume: 10000 (uL)Date Analyzed: 6/23/01Injection Volume: 2 (uL)Dilution Factor: 5.00GPC Cleanup: (Y/N) N pH:Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg)

ug/Kg-dry Q

12674-11-2	Aroclor 1016	107	U
11104-28-2	Aroclor 1221	214	U
11141-16-5	Aroclor 1232	107	U
53469-21-9	Aroclor 1242	107	U
12672-29-6	Aroclor 1248	107	U
11097-69-1	Aroclor 1254	1050	
11096-82-5	Aroclor 1260	107	U

SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CDFF034A

Lab Name: Ecology and Environment, Inc.Contract: RFP #1352/PLab Code: ECENCase No.: WESTON - EDISON/STARTSDG No.: 0106122Matrix: (soil/water) SOILLab Sample ID: 0106122-19ASample wt/vol: 31.48 (g/mL) GLab File ID: 369868% Moisture: not dec. 10.9Date Received: 6/15/01Extraction: (SepF/Cont/Sonc) SW3550BDate Extracted: 6/20/01Concentrated Extract Volume: 10000 (uL)Date Analyzed: 6/23/01Injection Volume: 2 (uL)Dilution Factor: 3.00GPC Cleanup: (Y/N) N pH:Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg-dry Q

12674-11-2	Aroclor 1016	64.2	U
11104-28-2	Aroclor 1221	128	U
11141-16-5	Aroclor 1232	64.2	U
53469-21-9	Aroclor 1242	64.2	U
12672-29-6	Aroclor 1248	64.2	U
11097-69-1	Aroclor 1254	776	
11096-82-5	Aroclor 1260	64.2	U

1D

CLIENT SAMPLE NO.

SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CDFF034B

Lab Name: Ecology and Environment, Inc.Contract: RFP #1352/PLab Code: ECENCase No.: WESTON - EDISON/STARTSDG No.: 0106122Matrix: (soil/water) SOILLab Sample ID: 0106122-20ASample wt/vol: 32.81 (g/mL) GLab File ID: 369867% Moisture: not dec. 8.59Date Received: 6/15/01Extraction: (SepF/Cont/Sonc) SW3550BDate Extracted: 6/20/01Concentrated Extract Volume: 10000 (uL)Date Analyzed: 6/23/01Injection Volume: 2 (uL)Dilution Factor: 5.00GPC Cleanup: (Y/N) N

pH:

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg)

ug/Kg-dry Q

12674-11-2	Aroclor 1016	100	U
11104-28-2	Aroclor 1221	200	U
11141-16-5	Aroclor 1232	100	U
53469-21-9	Aroclor 1242	100	U
12672-29-6	Aroclor 1248	100	U
11097-69-1	Aroclor 1254	640	
11096-82-5	Aroclor 1260	100	U

SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CDFF034C

Lab Name: Ecology and Environment, Inc.Contract: RFP #1352/PLab Code: ECENCase No.: WESTON - EDISON/STARTSDG No.: 0106122Matrix: (soil/water) SOILLab Sample ID: 0106122-21ASample wt/vol: 30.59 (g/mL) GLab File ID: 369866% Moisture: not dec. 10.2Date Received: 6/15/01Extraction: (SepF/Cont/Sonc) SW3550BDate Extracted: 6/20/01Concentrated Extract Volume: 10000 (uL)Date Analyzed: 6/23/01Injection Volume: 2 (uL)Dilution Factor: 10.00GPC Cleanup: (Y/N) N pH:Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg)

ug/Kg-dry

Q

12674-11-2	Aroclor 1016	218	U
11104-28-2	Aroclor 1221	437	U
11141-16-5	Aroclor 1232	218	U
53469-21-9	Aroclor 1242	218	U
12672-29-6	Aroclor 1248	218	U
11097-69-1	Aroclor 1254	616	
11096-82-5	Aroclor 1260	218	U

1D

CLIENT SAMPLE NO.

SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CDFF037A

Lab Name: Ecology and Environment, Inc.Contract: RFP #1352/PLab Code: ECENCase No.: WESTON - EDISON/STARTSDG No.: 0106122Matrix: (soil/water) SOILLab Sample ID: 0106122-22ASample wt/vol: 30.23 (g/mL) GLab File ID: 369863% Moisture: not dec. 4.45Date Received: 6/15/01Extraction: (SepF/Cont/Sonc) SW3550BDate Extracted: 6/20/01Concentrated Extract Volume: 10000 (uL)Date Analyzed: 6/23/01Injection Volume: 2 (uL)Dilution Factor: 5.00GPC Cleanup: (Y/N) N pH:Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	<u>ug/Kg-dry</u>	Q
12674-11-2	Aroclor 1016		104	U
11104-28-2	Aroclor 1221		208	U
11141-16-5	Aroclor 1232		104	U
53469-21-9	Aroclor 1242		159	
12672-29-6	Aroclor 1248		104	U
11097-69-1	Aroclor 1254		376	
11096-82-5	Aroclor 1260		377	

1D

CLIENT SAMPLE NO.

SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CDFF025B

Lab Name: Ecology and Environment, Inc.Contract: RFP #1352/PLab Code: ECENCase No.: WESTON - EDISON/STARTSDG No.: 0106122Matrix: (soil/water) SOILLab Sample ID: 0106122-23ASample wt/vol: 30.81 (g/mL) GLab File ID: 369862% Moisture: not dec. 10.1Date Received: 6/15/01Extraction: (SepF/Cont/Sonc) SW3550BDate Extracted: 6/20/01Concentrated Extract Volume: 10000 (uL)Date Analyzed: 6/23/01Injection Volume: 2 (uL)Dilution Factor: 5.00GPC Cleanup: (Y/N) N pH:Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg)

ug/Kg-dry Q

12674-11-2	Aroclor 1016	108	U
11104-28-2	Aroclor 1221	217	U
11141-16-5	Aroclor 1232	108	U
53469-21-9	Aroclor 1242	108	U
12672-29-6	Aroclor 1248	108	U
11097-69-1	Aroclor 1254	456	
11096-82-5	Aroclor 1260	108	U

1D

CLIENT SAMPLE NO.

SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CDFF025C

Lab Name: Ecology and Environment, Inc.Contract: RFP #1352/PLab Code: ECENCase No.: WESTON - EDISON/STARTSDG No.: 0106122Matrix: (soil/water) SOILLab Sample ID: 0106122-24ASample wt/vol: 30.55 (g/mL) GLab File ID: 369861% Moisture: not dec. 9.78Date Received: 6/15/01Extraction: (SepF/Cont/Sonc) SW3550BDate Extracted: 6/20/01Concentrated Extract Volume: 10000 (uL)Date Analyzed: 6/23/01Injection Volume: 2 (uL)Dilution Factor: 5.00GPC Cleanup: (Y/N) N pH:Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg)

ug/Kg-dry Q

12674-11-2	Aroclor 1016	109	U
11104-28-2	Aroclor 1221	218	U
11141-16-5	Aroclor 1232	109	U
53469-21-9	Aroclor 1242	109	U
12672-29-6	Aroclor 1248	109	U
11097-69-1	Aroclor 1254	684	U
11096-82-5	Aroclor 1260	109	U

1D
SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

CDFF026B

Lab Name: Ecology and Environment, Inc. Contract: RFP #1352/P
Lab Code: ECEN Case No.: WESTON - EDISON/START SDG No.: 0106122
Matrix: (soil/water) SOIL Lab Sample ID: 0106122-25A
Sample wt/vol: 31.8 (g/mL) G Lab File ID: 369860
% Moisture: not dec. 10.5 Date Received: 6/15/01
Extraction: (SepF/Cont/Sonc) SW3550B Date Extracted: 6/20/01
Concentrated Extract Volume: 10000 (uL) Date Analyzed: 6/23/01
Injection Volume: 2 (uL) Dilution Factor: 5.00
GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	<u>μg/Kg-dry</u>	Q
12674-11-2	Aroclor 1016		105	U
11104-28-2	Aroclor 1221		211	U
11141-16-5	Aroclor 1232		105	U
53469-21-9	Aroclor 1242		105	U
12672-29-6	Aroclor 1248		105	U
11097-69-1	Aroclor 1254		1330	
11096-82-5	Aroclor 1260		105	U

SW8082 AROCLOR ORGANICS ANALYSIS DATA SHEET

CDFF026C

Lab Name: Ecology and Environment, Inc.Contract: RFP #1352/PLab Code: ECENCase No.: WESTON - EDISON/STARTSDG No.: 0106122Matrix: (soil/water) SOILLab Sample ID: 0106122-26ASample wt/vol: 30.45 (g/mL) GLab File ID: 369879% Moisture: not dec. 14Date Received: 6/15/01Extraction: (SepF/Cont/Sonc) SW3550BDate Extracted: 6/20/01Concentrated Extract Volume: 10000 (uL)Date Analyzed: 6/25/01Injection Volume: 2 (uL)Dilution Factor: 5.00GPC Cleanup: (Y/N) N pH:Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	<u>ug/Kg-dry</u>	Q
12674-11-2	Aroclor 1016		115	U
11104-28-2	Aroclor 1221		229	U
11141-16-5	Aroclor 1232		115	U
53469-21-9	Aroclor 1242		115	U
12672-29-6	Aroclor 1248		115	U
11097-69-1	Aroclor 1254		747	
11096-82-5	Aroclor 1260		115	U

CHAIN OF CUSTODY RECORD

1352
 0025627



Removal Support Team
 EPA CONTRACT 68-W-00-113
 Phone (732)225-6116 Fax: 732-225-7037

Matrix Box No.	Preservative Box No.
1. Surface	1. HCl
2. Ground Water	2. HN03
3. Leachate	3. Na2SO4
4. Rinsate	4. H2SO4
5. Soil/Sediment	5. Other (Specify)
6. Oil	6. Ice Only
7. Waste	N. Not Preserved
8. Other (Specify)	* See Comments

1 of 3

and verbal and written results to:

Roy F. Weston, Inc.
 Suite 201, 1090 King Georges Post Road, Edison, New Jersey 08837-3703
 Attention: Smita Sumbaly, RST Analytical Coordinator

Sample Number	Sample Collection Date/Time	Sample Matrix (Enter box 1)	Conc. Low-L Med-M High-H	Sample Type Comp-C Grab-G	Sample Preserv. (Enter box 8)	RAS ANALYSIS						RCRA ANALYSIS			
						VOA	BNA	PEST	PCBs	TAL	CN	IGN	COR	REAC	OTHER
RIN061301	6-14-01 1005	4	L	G	6				X						
RIN061401	1240	4	L	G	6										
COFF002B	1020	5	L	G	6										
COFF002C	1025														
COFF002D	1030														
COFF003B	1040														
COFF003C	1045														
COFF003D	1050														
COFF035A	1105														
COFF035B	1110														
COFF035C	1115														

Comments:

Person Assuming Responsibility for Samples:					Time/Date	
JOHN BRENNAN						
Sample Number	Relinquished By:	Time	Date	Received By:	Reason for Change of Custody	
ALL	[Signature]	1530	6/14/01	[Signature]	Ship to Lab	
Sample Number	Relinquished By:	Time	Date	Received By:	Reason for Change of Custody	
			6/15/01	[Signature]		
Sample Number	Relinquished By:	Time	Date	Received By:	Reason for Change of Custody	

Roy F. Weston, Inc.
 FEDERAL PROGRAMS DIVISION
 Association with Inland Pollution Services P.R., Inc., Resource Applications, Inc., and GRB Environmental Services, Inc.

CHAIN OF CUSTODY RECORD

RP No.	1352
PD No.	0025627



Removal Support Team
EPA CONTRACT 68-W-00-113
Phone (732)225-6116 Fax: 732-225-7037

Matrix Box No.	Preservative Box No.
1. Surface	1. HCl
2. Ground Water	2. HN03
3. Leachate	3. Na2SO4
4. Rinsate	4. H2SO4
5. Soil/Sediment	5. Other (Specify)
6. Oil	6. Ice Only
7. Waste	N. Not Preserved
8. Other (Specify)	* See Comments

2 of 3

Send verbal and written results to:

Roy F. Weston, Inc.
Suite 201, 1090 King Georges Post Road, Edison, New Jersey 08837-3703
Attention: Smita Sumbaly, RST Analytical Coordinator

Sample Number	Sample Collection MM/DD/YY Time	Sample Matrix (Enter box 1)	Conc. Low-L Med-M High-H	Sample Type Comp-C Grab-G	Sample Preserv. (Enter box 8)	RAS ANALYSIS						RCRA ANALYSIS				
						VOA	BNA	PEST	PCBs	TAL	CH	IGN	COR	REAC	OTHER	
COFF035D	6-14-01 1120	5	L	G	6				X							MS/MSD
COFF036A	1130															
COFF033C	1140															
COFF008B	1245															
COFF008C	1250															
COFF008D	1255															
COFF018B	1305															
COFF034A	1310															
COFF034B	1315															
COFF034C	1320															MS/MSD
COFF037A	V 1325	V	V	V	V				V							

Comments:

Person Assuming Responsibility for Samples:

JOHN BRENNAN

Time/Date


Sample Number	Relinquished By:	Time	Date	Received By:	Reason for Change of Custody
ALL	<i>[Signature]</i>	1530	6/14/01	<i>[Signature]</i>	Ship to Lab
Sample Number	Relinquished By:	Time	Date	Received By:	Reason for Change of Custody
			6/15/01	<i>[Signature]</i>	
Sample Number	Relinquished By:	Time	Date	Received By:	Reason for Change of Custody

Roy F. Weston, Inc.
FEDERAL PROGRAMS DIVISION
Association with Inland Pollution Services P.R., Inc., Resource Applications, Inc., and GRB Environmental Services, Inc.

WESTON
MANAGERS DESIGNERS/CONSULTANTS

Matrix Box No.	Preservative Box No.
1. Surface	1. HCl
2. Ground Water	2. HN03
3. Leachate	3. Na2SO4
4. Rinsate	4. H2SO4
5. Soil/Sediment	5. Other (Specify)
6. Oil	6. Ice Only
7. Waste	N. Not Preserved
8. Other (Specify)	* See Comments

30F3

Sample Number	Sample Collection MM/DD/YY Time	Sample Matrix (Enter box 1)	Conc. Low-L Med-M High-H	Sample Type Comp-C Grab-G	Sample Preserv. (Enter box 6)	HAC ANALYSIS				RCRA ANALYSIS					
						VOA	BNA	PEST	PCBs	TAL	CN	IGN	COR	REAC	OTHER
C0FF025B	6.14.01 1340	5	L	G	6				X						
C0FF025C	↓ 1345	↓	↓	↓	↓				↓						
C0FF026B	↓ 1355	↓	↓	↓	↓				↓						
C0FF026C	↓ 1400	↓	↓	↓	↓				↓						
															

Person Assuming Responsibility for Samples:					Time/Date
JOHN BRENNAN.					
Sample Number ALL	Relinquished By: <i>[Signature]</i>	Time 1530	Date 6/14/61	Received By: <i>[Signature]</i>	Reason for Change of Custody <i>[Signature]</i>
Sample Number	Relinquished By:	Time	Date 6/15/61	Received By: <i>[Signature]</i>	Reason for Change of Custody
Sample Number	Relinquished By:	Time	Date	Received By:	Reason for Change of Custody



Roy F. Weston, Inc.
Federal Programs Division
Suite 201
1090 King Georges Post Road
Edison, New Jersey 08837-3703
732-225-6116 • Fax 732-225-7037

REMOVAL SUPPORT TEAM
EPA CONTRACT 68-W-00-113

FACSIMILE TRANSMITTAL

FAX: (732) 225-7037/7030

TO: ERIC WILSON

Recipient's Telecopy

Telephone # (732) 906-6182

Recipient's Confirmation

Telephone # _____

FROM: JOHN BRENNAN

Originator's Telephone # _____

TOTAL PAGES: 27 (Inc. Cover Sheet)

P.O. DRAFT DATA
Sent By CORNELL DUBILIER

ORIGINAL WILL:

Sender's Telephone # _____

- ☐ Follow via mail
☐ Follow via messenger
☐ Follow via overnight service
☒ Not be sent

Date _____ Time _____

COMMENTS:

RIN 061301
RIN 061401
COFF 002 (B) C, D ✓
COFF 003 B, C, D ✓
COFF 035 (A) B, C, D ✓
COFF 036 A → DUPLICATE OF 35A
— COFF 033 C ✓
COFF 008 (B) C, D ✓
— COFF 018 (B) ✓
COFF 034 A, B, C ✓
COFF 037 A → DUPLICATE OF 34A
COFF 025 B, C ✓
COFF 026 (B) C ✓

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